

## CLAIMS

1. A hair dye composition comprising the following ingredients (A) and (B):

(A) a compound having a 5- or 6-membered lactone skeleton,  
5 and

(B) an acid dye; and  
having a pH of from 2 to 6 and a buffer capacity not lower than  
0.004 gram equivalent/L but lower than 0.2 gram equivalent/L  
as measured in a form of a tenfold dilute aqueous solution.

2. A hair dye composition according to claim 1, further  
10 comprising the following ingredient (C):

(C) a fragrance composition comprising a combination of  
a fragrance substance having a ClogP value not greater  
than 1.5 and another fragrance substance having a ClogP  
15 value not smaller than 3.0.

3. A hair dye composition according to claim 1 or 2, further  
comprising the following ingredient (D):

(D) at least one organic solvent selected from benzyloxy  
ethanol, benzyl alcohol, phenoxyethanol,  
20 phenoxyisopropanol, benzyl glycerol,  
N-benzyl-formamide, cinnamyl alcohol, phenethyl  
alcohol, p-anisyl alcohol, ethanol, 1-propanol,  
2-propanol, 1-butanol, butoxyethanol,  
p-methylbenzyl alcohol, methyl carbitol, ethyl

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carbitol, or propyl carbitol.

4. A hair dye composition according to claim 1 or 2, wherein said ingredient (A) is a compound having a 5- or 6-membered lactone skeleton and carrying an alkyl group having 2 or more carbon atoms and substituted thereon.

5. A hair dye composition according to claim 4, wherein said ingredient (A) is  $\gamma$ -hexanolactone or  $\gamma$ -heptanolactone.

6. A hair dye composition according to claim 1 or 2, comprising Acid Orange 7 as said ingredient (B).

7. A method of dyeing hair, which comprises applying onto said hair a hair dye composition according to claim 1 or 2.

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